***Algebra 1***

Yearlong 2020/2021

**Eligible Students:**

#### Eligible Students: 8th-9th Grades (10th- 12th Grades Welcome)

This course is designed for students who have successfully completed Pre-Algebra or its equivalent. Eighth graders are welcome with the understanding that this is a high school level math course. The student completing this course earns 1 high school course credit.

**Class Dates:** Begin Wednesday, Sept. 9, 2020- Friday, May 28, 2021

**Class Times: Monday, Wednesday, Friday: 9:30 — 10:45am** (EST)

**Instructor:** Alison Haley, M.S.

**E-mail:** alison.haley.education@gmail.com

**Schedule for *Algebra 1:***

**Class Sessions Dates:**

**Classes will take place on Monday, Wednesday, and Friday: 9:30 — 10:45am** (EST) **for 32 weeks and 92 classes on the following dates\***

**Orientation: Monday, August 31, 2020 @ 9:30 ET**

**September** (10): 9, 11, 14, 16, 18, 21, 23, 25, 28, 30

**October** (13): 2, 5, 7, 9, 12, 14, 16, 19, 21, 23, 26, 28, 30

**November** (10): 2, 4, 6, 9, 11, 13, 16, 18, 20, **[Thanksgiving Break],** 30

**December** (8): 2, 4, 7, 9, 11, 14, 16, 18 **[Christmas Break]**

**January** (9): **[Christmas Break]**, 11, 13, 15, 18, 20, 22, **[End 1st Semester],** 25, 27, 29

**February** (9): 1, 3, 5, 8, 10, 12, 15, 17, 19

**March** (12): 1, 3, 5, 8, 10, 12, 15, 17, 19, 22, 24, 26 **[Holy Week]**

**April** (12): 5, 7, 9, 12, 14, 16, 19, 21, 23, 26, 28, 30

**May** (9): 3, 5, 7, 10, 12, 14, 17, 19, 21 **[End 2nd Semester]**

#### School Calendar

The school year is 32 weeks and meets three times per week except during the following holiday breaks:

**September 7th, November 23-27th, December 21-January 8th, February 22-26th, March 29- April 1st**

\*Please note that all dates are subject to changes as the instructor’s circumstances might dictate (emergency or illness). Any cancelled classes will be made up at an alternate time by the instructor or a recording will be provided.

***Algebra 1* Course Description:**

Classes are live and highly interactive, with students regularly interacting with their instructor and peers and participating in class discussion. **Students are expected to attend classes with their videos turned on and to function as a full participant in each class,** **contributing to the class dynamic and success of the entire cohort.**

We allow a maximum of 9 absences for yearlong courses that meet 3 times per week.

See Student-Parent Handbook.

***Algebra 1* Course Map:**

**Semester 1**

Unit 0- Review and Preparation

Unit 1- Foundations for Functions

Chapter 1- Expressions, Equations, and Functions

Chapter 2- Linear Equations

Unit 2- Linear Functions and Relations

 Chapter 3- Linear Functions

Chapter 4- Linear Functions and Relations

 Chapter 5- Linear Inequalities

Chapter 6 Systems of Linear Equations and Inequalities

**Semester 2**

Unit 3- Nonlinear Expressions, Equations, and Functions

Chapter 7- Polynomials

Chapter 8- Factoring and Quadratic Equations

Chapter 9- Quadratic and Exponential Functions

Unit 4- Advanced Functions and Equations

Chapter 10- Radical Functions and Geometry

Chapter 11- Rational Functions and Equations

Unit 5- Data Analysis

Chapter 12- Statistics and Probability

**Office Hours:** In addition to scheduled class times, teachers will generally designate an optional weekly session as needed. During “Office Hours” students may raise questions, seek assistance, or review class material.



**Required Course Texts:**

**Glencoe Algebra 1, 2010 Edition**

The Glencoe Algebra 1 textbook is accessible to students of all mathematical abilities. Each lesson contains a large number of practice problems, higher-order thinking problems, and a spiral review. Each chapter contains a review of concepts that will be needed in the chapter, hands-on learning labs, and a chapter review.

* Digital tablet. We recommend Wacom Intuos tablets. Similar products may be used.
* Three-ring notebook dedicated to this course
* Five dividers
* Binder Pencil Pouch with multiple sharpened pencils, erasers, straight edge, protractor, and a drawing compass or bullseye compass
* Notebook paper and graph paper
* Google account to log into free virtual products such as Desmos and Ziteboard.

**Optional Course Texts:** None

***Algebra 1* Course Description:**

Algebra I serves as the foundation for all future mathematics courses. It is the course where students begin to formulate abstract algebraic generalizations from their concrete under-standing of mathematics. Students will learn to solve problems using equations, inequalities, and graphs. Students will investigate linear relationships, translating those relation-ships into mathematical equations. Students will explore: solving equations and inequalities, simplifying expressions, linear and quadratic functions, exponents, polynomials, factoring, radicals, data analysis, and probability.

**Student Expectations: Executive Function Skills**

Students enrolling in Scholé Academy’s Mathematics Program will be expected to show development of Executive Function Skills throughout the year. Executive Function Skills speaks to a set of qualities and skill sets students can develop and hone to better approach the courses, lectures, readings and teachers they will face in their future academic course-work.

1. **An Engaged Student:** One who is not easily distracted by their surroundings and is willing to step into the arena of class discussion, ask questions, supply answers, generate the internal dialogue necessary to determine if what's being discussed is important and necessary to himself.

2. **Note Takers:** A student who during and after being engaged with the class has beentrained to note important and relevant content in an organized manner. His notes would then be consulted, independently, for application in assignments and assessments.

**3. Attention to Detail & Preparedness:** These students are ones who consistently adhereto deadlines, submission requirements, assignment instructions, and confirm technology is working prior to the start of class. This student is responsible in determining how to proceed after an absence and adjusting as the class proceeds, etc.

**4. Employ Critiques:** These students are ones who receive feedback to one of their submissions, and then are sure to apply that feedback to future assignments rather than repeating mistakes. These students also glean information from the live class critiques of fellow students and note mistakes to avoid by learning from others.

**5. Initiative/Maturity:** During class this student will display a level of maturity that exhibits an ability to focus and engage in his learning and refrain from activities that cause him to become a distraction for others. The student exhibits the maturity to seek out appropriate sources of assistance when struggling with assignments or problems.

**Student Expectations In Action**

In this class, students will be expected to listen attentively and participate actively. Students are expected to arrive to class on time and with all assigned material completed. The instructor will facilitate instruction for the student, but the responsibility for staying up-to-date with classwork and assignments ultimately falls to the student. If a student is struggling with content or an assignment, it is their responsibility to seek help. Students should not utilize technology to complete their assignments for them.

The course relies heavily on discussion as students are asked to think about and question what they are learning. During the discussion, students will present problems, review answers, pose questions, explain and justify their answers, and think out-loud. Students are encouraged to embrace their mistakes as opportunities to learn. A *FAIL* is a first attempt in learning. If a student performs poorly on an assignment, they are expected to rework the assignment (or an alternative) for full or partial credit.

**Submission of Assignments**

All assignments will be due into the appropriate Schoology Assignment folder prior to the start of class each day. Students turning in late work will earn a 10% penalty for each day the assignment is late. Students will submit their work by scanning their homework pages and uploading it into the Schoology assignment window. Photographs of completed assignments will not be accepted as they are incredibly difficult to read.

**Student Evaluation: Grading**

Grades are a feedback mechanism from the teacher to the student as to their level of mastery. In line with a theme of restfulness, assignments will be communicated using a Mastery Scale as defined below. The purpose of this grading scale is to provide students with a clear, unambiguous message as to their level of mastery. Additionally, it provides the students with the opportunity to focus on mastery of the content rather than grades.

Inasmuch as you might be fully on board with this grading method in theory, there will undoubtedly be the need to complete a college transcript with either a numeric or traditional letter grade. Traditional percentage grades will be provided for transcript purposes upon request. Additionally, Dr. Riley will provide a transcript of that grade to the requesting parent at the end of the year.

**Master**- this grade will be rewarded to a student whose work shows mastery of the material.

**Journeymen**- this grade will be rewarded to students who are near mastery. This level is considered to be satisfactory, but students will be encouraged to continue working on the assignment.

**Apprentice**- this grade will be rewarded to students who need to spend more time studying the content. They will be encouraged to rework the assignment and may be provided with additional study materials as needed.

**Student Evaluation: Mastery Portrait**

Mastery portrait: Students who are prepared to take this class have completed a pre-algebra course and are maturing tweens and teens. Being able to move from the concrete to abstract is a necessary skill for algebraic thinking. Students who work with discipline and have regular work time set aside for restful diligence will be successful. Growing in the fundamental skills of accurate arithmetic, the student will begin to enjoy the fruit of that fluency.

* At the completion of this course *master level* students will be able to identify and manipulate linear functions. Additionally, they will be able to graph linear equations and inequalities and solve systems of equations. Students will begin the study of polynomials and can successfully factor quadratic equations. Using radical functions, students will integrate geometric applications with mastered algebraic skills.
* Students will also be guided in development of the virtues of Truth, Goodness, and Wisdom. Ideally, students will demonstrate perseverance and self-discipline in wrestling through challenging concepts to move from what is known to what is new.
* The master level student will demonstrate balanced humility and boldness in the online classroom to both give and receive feedback from others.

**Student Evaluation: assignments, Types & Weights**

Mrs. Haley will communicate with students regarding assignment feedback and grading through the free online grading system, Schoology. The teacher will provide students with more detailed information and access to the Art of Argument course page.

Student’s grades will be comprised of:

Classwork 15%

Independent Practice 40%

Projects 15%

Assessments 15%

Lab Work 15%

**Student Evaluation: Academic Dishonesty**

Students will often take assessment tests and/or quizzes privately at home. Students are on their honor to abide by [Scholé Academy’s Learning Philosophy](http://www.scholeacademy.com/student-parent-handbook/) which assumes the personal cultivation of Student-Virtues described in the Student-Parent Handbook.

Additionally, plagiarism is a serious and punishable offense. Proper citation of all sources is essential to the academic endeavor. Remember to cite any source if the information is not common knowledge or is an opinion obtained through any source. A plagiarized assignment will result in a failing grade. Students should consult their chosen style manual (see Student Expectations above) for specific direction on obtaining, quoting and paraphrasing sources.

**The Virtual Classroom:**

We will be using the free online “virtual classroom” software provided by Zoom, one of the leading companies that provides such software.  The virtual classroom will provide students with interactive audio, text chat and an interactive whiteboard in which texts, diagrams, video and other media can be displayed and analyzed. We will provide students with a link (via email) that will enable students to join the virtual classroom.

Specific information regarding the technology used by Scholé Academy (including required technology) can be found by visiting the [Technology in the Classroom](http://www.scholeacademy.com/student-parent-handbook/) section of the Student Parent Handbook.

Students will submit documents by scanning and uploading them to their personal computer, then attaching those files as .pdfs to an email. They will submit their work to the *Algebra 1* Schoology assignment page (access granted after enrollment is secured).

**About the Instructor:**

**Alison Haley** earned a M.S. in Mathematics and Reading in 2011 and is completing a M.Ed. in Curriculum and Instruction with an emphasis in Mathematics in the summer of 2020. She is well equipped as a student of the classical tradition and emphasizes the importance of a liberal arts foundation in a STEM culture. Growing up in a rural area, she has a heart for making dynamic, classical education accessible to those who desire its fruit regardless of geographic or socioeconomic hurdles. Alison has homeschooled her four children and worked extensively in serving the homeschooling community. Beyond school and work, her family enjoys running, athletics, music, and a competitive game of Euchre.

She believes cultivating educational virtue is a foundation for student success. As a math instructor, her desire is to promote wonder that leads to worship while students connect abstract concepts with tangible representations. Restful diligence is necessary for students to reap the fruit of the art of number, and seeing God’s nature through mathematics gives students a more complete understanding of our Creator. She believes that all students can be successful and offers classroom environments of engagement, participation, and growth. Alison is serving Scholé Academy in the math department and as a private tutor in many disciplines. Reach out to her at alison.haley.education@gmail.com.